

PHI PHI MYSTERY

US scientist suggests new theory for Belanger sisters' deaths

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An American scientist who worked on Gulf War Syndrome has proposed a possible new scenario to explain how the two Canadian sisters, Noemi and Audrey Belanger, died on Phi Phi on the night of June 14.

So far forensic examinations have concentrated on the possibility that the sisters might have drunk a version of the teen narcotic drink *See Koon Loy*, with the insect repellent Deet added to it.

See Koon Loy normally consists of ground-up kratom leaves and prescription cough mixture mixed with cola and ice, though many other ingredients may be added.

News reports have said that Thai forensic scientists concluded that the sisters were possibly killed by an overdose of Deet – maybe a mistake by the person who mixed the “cocktail” for them.

News reports in Canada, however, say the Canadian scientists disagree; they detected Deet in the women’s bodies, but not in high enough concentrations to cause discomfort, let alone illness or death.

Dr James Moss has proposed a different hypothesis: that Deet has “beta adrenergic agonist activity”. In layman’s terms, this means that Deet by itself, and *See Koon Loy* by itself, would not kill.

But the two in combination might.

Dr Moss has done considerable – and initially controversial – research on the beta adrenergic agonist activity of Deet as part of his quest to explain Gulf War Syndrome, a cluster of as-yet-unexplained illnesses affecting US soldiers involved in the First Gulf War in 1991.

About one third of the 697,000 servicemen and women involved in that war still live with Gulf War Syndrome.

Dr Moss proposed a theory, which he attempted to back up with research, that the syndrome was caused by a combination of Deet the soldiers sprayed on themselves as mosquito repellent and Pyridostigmine Bromide pills, given to soldiers as an antidote to nerve gas. The Americans were worried that the Saddam Hussein regime of Iraq would use nerve gas against US troops.

Dr Moss’s employer, the US Department of Agriculture (USDA), did not like the way this was heading – if he could prove his theory, it might lay the US government open to suits for compensation totalling billion of dollars.

When he pursued his research despite its disapproval – and testified at a televised US Senate hearing despite being told not to talk to anyone about his research – the USDA decided not to renew his contract.

“I attempted to confirm my suspicions that Deet had some



Dr James Moss: Similarities between the Phi Phi deaths and Gulf War syndrome?

adrenergic activity, using rats,” Dr Moss told *The Phuket News*.

“I found that adrenergic agonists and antagonist drugs had potent effects on the time to convulsions from a fixed dose of Deet.

“One drug reduced the time to convulsions from 40 minutes to less than one minute (the animal died while I was setting down my instruments, probably from cardiac arrest).

“Another time, with a lower Deet dose and the same drug, the time to convulsions was reduced from 60 minutes to 15 minutes. The drug was

yohimbine.”

Yohimbine is, according to Wikipedia, “structurally related” to 7-hydroxymitragynine and mitragynine, two of the active ingredients in kratom. That said, Wikipedia adds that “their pharmacology is quite different”.

But, Dr Moss says, “The kratom leaf suggested by the press as part of something possibly consumed by Audrey and Noemi Belanger, seems to contain some of the same adrenergic activity I tested 15 or so years ago.

“At least one kratom chemi-

cal, Tetrahydroalstonine, is anti-adrenergic at alpha-2 receptors, like yohimbine.

“I did not collect enough data to publish this, but if my other Gulf War chemical hypotheses can serve as a model, I’m probably right.

“This is (one) reasonable explanation for the death of these girls that can be verified fairly easily.”

The Phuket News asked Dr Moss whether a combination of kratom in the drink and Deet on their skins could have caused the sisters’ deaths.

His response: “On the skin

or in the drink, either way would work.”

This opens up the possibility that the sisters, after spraying themselves with a repellent containing Deet, headed out for an evening in Phi Phi village.

Drinking *See Koon Loy*, with its cargo of kratom, might have sparked the violent and deadly reaction that the repellent on its own, or the *See Koon Loy* on its own, would not have.

Both the Thai and Canadian governments have clamped a gag on information about forensic results. *The Phuket News* emailed the Canadian pathologist who carried out the autopsy on the sisters and received no response.

It is understood that information on the results from the Canadian side was released by the sisters’ family, not the government.

An official of the Thai Central Forensic Institute, speaking on condition of anonymity, said that she did not know where the reports saying Thai scientists had pinpointed Deet as the cause of death had come from.

“Deet was only one element in the deaths,” she said, but declined to give further information, adding that the gag order was still in place.

Whether either set of forensic scientists will take heed of Dr Moss’s theory and follow up remains to be seen.

Meanwhile, the tragic deaths of the two young women will remain a mystery.

Jumper survives 18-floor hotel dive

AUSTRALIAN JOHN BERNARD Hurley was rushed to hospital after he jumped from the 18th floor of the Royal Paradise Hotel in Patong on Tuesday (November 13) – and miraculously survived.

Mr Hurley, 39, suffered seven broken ribs, his left leg was broken in three places, his wrist was smashed and he

suffered internal bleeding said a member of the emergency room staff in Patong Hospital.

Police said that Mr Hurley had been staying in the hotel, and had run out of money.

One report said that Mr Hurley crashed through a canopy before hitting the ground, breaking his fall somewhat and, perhaps, saving his life.

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